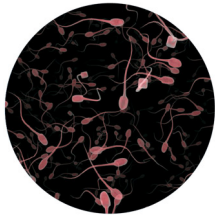


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By: Stefan Anitei, Science Editor



[What Causes Headless Paralyzed Sperms?](#)

New possible cause of male infertility

Oddly shaped sperms or too few sperm cells are the factors that make men (in almost 50 % of the cases) the culprit for a couple's infertility. In many cases, this is due to genetic defects (mutations). Scientists believe they have discovered a gene which plays a critical role in the development of sperm. A team at the Howard Hughes Medical Institute has discovered a mutation in the *Jhdma2a* gene that could be responsible for some cases of infertility. Mice carrying the mutation were infertile, generating small counts of abnormal sperm. The research team thinks the *Jhdma2a* gene is crucial for "spermogenesis", permitting the DNA necessary to be delivered into an embryo to be crowded into a tight ball located inside the head of the sperm so that it can penetrate through the outer membrane of the ovule (egg). To check this hypothesis, the team engineered mice lacking the *Jhdma2a*. These mice presented extremely small testes, a very low sperm count, and were sterile. The few sperms they generated presented abnormally shaped heads and immobile tails. Dyeing techniques showed that the DNA was not compacted correctly in the sperm's head. "Defects in this gene could be the cause of some cases of male infertility. Because this gene has a very specific effect on the development of functional sperm, it holds great potential as a target for new infertility treatments that are unlikely to disrupt other functions within the body.", said lead researcher Dr Yi Zhang. Still, the researchers have to prove that what causes an impairment in mice has the same function in humans, and the team now wants to investigate the DNA of infertile men to check if this gene is impaired in any of them. "The genes that control sperm development are poorly understood. The way that sperm DNA is packaged into the sperm head is quite unique and we know even less about that. It would be very useful to translate this research into human males and see if it can explain why some men simply don't produce healthy sperm and are therefore sub-fertile.", said Dr Allan Pacey, a senior lecturer in andrology at the University of Sheffield, and Secretary of the British Fertility Society.